



Bike South Bend 2010-12

City of South Bend
Bicycle Plan

Introduction

Interest in bicycling in the City of South Bend has grown rapidly in recent years. Bicyclists now use new trails on the bank of the St. Joseph River for recreational trips and use bicycle lanes on City streets to commute to work. Census data indicate South Bend is Indiana's top-ranked city for bicycle commuting.¹ During the process to develop *City Plan*, the city's comprehensive plan, citizens said the encouragement of alternative transportation including bicycling was a top priority. Also, Mayor Stephen Luecke has set the goal of having South Bend achieve status as a Bicycle Friendly Community.²

Bike South Bend 2010-12 has been created to

- coordinate efforts to make bicycle travel in South Bend safe, convenient, and attractive,
- assist the City of South Bend achieve Bicycle Friendly Community status, and
- capture the potentially large benefits to the individual and to the community provided by bicycling.³

¹ According to 2008 data from the United States Census Bureau's American Community Survey, an estimated 2.29 percent of South Bend residents used a bicycle as their primary means of transportation to work. This 2.29 percentage was the highest among Indiana cities with data available for 2008 and was more than a five-fold increase over the 0.41 percent of South Bend residents who used a bicycle to get to work in 2000.

² The League of American Bicyclists grants a Bicycle Friendly Community designation to cities that actively support bicycling. For more on the Bicycle Friendly Community designation, see

<http://www.bikeleague.org/programs/bicyclefriendlyamerica/communities/>.

³ For the latest on the City of South Bend's bicycling efforts, see *Bike South Bend* at <http://www.southbendin.gov/bike>.

Bike South Bend 2010-12 is the City of South Bend's bicycle plan. The plan, drafted in 2010, provides an overview of bicycling efforts in the City and prioritizes bicycle infrastructure improvements and related initiatives over a three-year period. *Bike South Bend 2010-12* was prepared by the City of South Bend Department of Community & Economic Development in cooperation with the City's Department of Public Works and the Bike Michiana Coalition, a nonprofit bicycle advocacy organization that coordinates the efforts of bicycling groups in the South Bend region.⁴



Bicycling Colfax Avenue

⁴ For more on the Bike Michiana Coalition, see <http://bikemichiana.org/>.

Benefits of Bicycling

Bicycling has many benefits, both to the individual and to the community and society at large.⁵ Some of these benefits are summarized below:

Financial Benefits to City / Economic Development: supplies a quality-of-life asset that helps draw businesses and residents, serves as a tourist attraction, increases tax base as properties near bicycle routes are more highly valued, lessens maintenance costs by eliminating wear and tear on streets caused by motorized traffic

Financial Benefits to Residents: reduces or eliminates cost of motor vehicle operation, lowers health care costs, increases value of home if close to bicycle routes

Traffic & Safety Benefits: offers choice of transportation mode (especially for short trips), reduces traffic congestion and can calm traffic, enhances safety of users for all transportation modes

Health & Fitness Benefits: provides great exercise, reduces weight and risk of chronic illness, lowers stress

Environmental Benefits: reduces air pollution, limits the use of non-renewable energy sources

⁵ These benefits from bicycling are based on information from the Pedestrian and Bicycle Information Center. For more details, see <http://www.bicyclinginfo.org/why/>.

Bikeway Types

The American Association of State Highway and Transportation Officials (AASHTO) defines a bikeway as “a generic term for any road, street, path or way which in some manner is specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.” For its routes, the City of South Bend uses three types of bikeways: separated trails, striped bicycle lanes, and shared routes. Adapting AASHTO definitions and information,⁶ this plan provides a brief description and information about the use, cost, and local application of each of these types below.



Bikeway South Bend

⁶ American Association of State Highway and Transportation Officials (AASHTO). *Guide for the Development of Bicycle Facilities*. Washington, DC. 1999. See AASHTO website, www.transportation.org.

Separated Trails



Separated Trail Riverside Trail

Description: Separated trails are paved pathways physically separated from motor vehicle traffic. Trail use is limited to bicycle, pedestrian, and other non-motorized traffic. Trails may run along natural features such as a river, down a conversion of a former railroad right-of-way, or along the edge of a street

General Design Standards: Trails are recommended to be 10 feet wide. Eight-foot wide paths may be used sparingly where use is expected to be light; widths of 12-14 feet may be desirable in areas of heavy bicycle or pedestrian traffic.

Ideal Use: Separated trails are best used along scenic corridors and commuting routes that have few street and driveway crossings. Additional consideration for installing a trail along a street may be given where motorized traffic is fast (above 40 miles per hour) or heavy (traffic counts of more than 18,000 vehicles daily) and right-of-way is available.

Approximate Cost: \$750,000 - \$1,000,000 per mile (costs may be significantly higher for extensive grading, landscaping, and where property acquisition is required for right-of-way)

Local Examples: Riverside Trail, East Bank Trail, Portage Avenue sidepath (north of Lathrop Street)

Striped Bicycle Lanes

Description: A bicycle lane is a portion of a roadway which has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists.

General Design Standards: Bicycle lanes are at least 5 feet wide and are placed on both sides of the street to carry bicycle traffic in the same direction as motorized traffic. Bicycle lanes are placed between traffic lanes (usually 12 feet wide) and parking lanes (when present, usually 8 feet wide).

Ideal Use: Bicycle lanes are most appropriate for use in urban areas having a regular frequency of cross streets and driveways. Lanes work well on streets with motor vehicle traffic counts between 10,000 and 18,000 vehicles daily. Bicycle lanes are often used on streets with motor vehicle speeds around 30 miles per hour; lanes can be widened or separated from vehicle traffic lanes by a painted buffer when travel speeds are faster (especially above 40 miles per hour).

Approximate Cost: \$2,500 per mile

Local Examples: Mishawaka Avenue, Orange Street, Twyckenham Drive



Bicycle Lane Mishawaka Avenue

Shared Routes



Shared Route Ford Street

Description: A shared route is a roadway open to both bicycle and motor vehicle traffic that has no bicycle lane but is designated by signs as a preferred route for bicycle use. In South Bend, routes are marked by “Share the Road” and bike route signs.

General Design Standards: Signs are added along the street to indicate it is a bicycle route.

Ideal Use: Shared routes are used in urban and suburban settings where motor vehicle traffic moves relatively slowly (under 30 miles per hour) or is relatively light (traffic counts under 10,000 vehicles daily). Shared routes may also be used to connect segments of a bicycle route across areas where pavement width is not sufficient to install bicycle lanes.

Approximate Cost: \$1,500 per mile

Local Examples: Ford Street, York Road

While basics about the use of bikeways are described above, the design and installation of separated trails, striped bicycle lanes, and shared routes are subject to the standards of AASHTO design guides, the Federal Highway Administration’s Manual on Uniform Traffic Control Devices,⁷ and engineering judgment. For the design of bicycle lanes, the City of South Bend also references the Chicago Bike Lane Design Guide.⁸

⁷ For the Manual on Uniform Traffic Control Devices, see <http://mutcd.fhwa.dot.gov/>.

⁸ For the Chicago Bike Lane Design Guide, see <http://www.activelivingresources.org/assets/chicagosbikelanedesignguide.pdf>.

History of South Bend Bicycle Routes

The history of bikeways in South Bend is more than three decades old. The City of South Bend began installing portions of its Riverwalk system in 1975. Starting on the west bank of the St. Joseph River at LaSalle Street, phases of the West Bank Walkway were added to south to Monroe Street. In the 1980s, the East Bank Walkway was completed north from Howard Park to the outlet of the East Race. The East Bank Trail, stretching from Howard Street to Angela Boulevard and one of Indiana's first rail to trail conversions, was opened in 1988. The Northside Trail was constructed from Howard Park to Veterans Memorial Park (near Twyckenham Drive). A forerunner to today's bicycle network, a region-wide system of shared bicycle routes was created by the Michiana Area Council of Governments in 2001. The East Bank Walkway was extended from the mouth of the East Race to connect to the East Bank Trail at Howard Street in 2002. By the end of 2006, South Bend had 7 miles of separated trails and 0.9 miles of striped bicycle lanes, painted on Twyckenham Drive between McKinley and South Bend Avenues in the mid-1990s.

In 2006, the South Bend Common Council adopted *City Plan*, South Bend's 20-year comprehensive plan. As part of the planning process, the public identified encouraging bicycling as a form of alternative transportation as one of the top priorities for the community. *City Plan* called for the City to develop and implement a strategy to develop additional bicycle routes, including trails and lanes. In his 2007 State of the City Address, Mayor Stephen Luecke stated the City would

- Add 10 miles of new bicycle routes per year each year through 2011 to create a bicycle network of more than 50 miles, and
- Complete the Riverwalk system from where the St. Joseph River enters the City at Logan Street to where it exits the City at Darden Road by 2011.



Riverside Trail Phase II Construction

To meet these goals, the City developed a long-term route plan that created the South Bend Bicycle Network. Bicycle routes were quickly added in the City. In 2007, the Twyckenham Drive bicycle lanes were extended (with some short gaps) south to Ewing Avenue, and bicycle lanes were introduced to Mishawaka Avenue. The following year, lanes were added to create a west side route on Orange Street, Bendix Drive, and Westmoor Street. The Riverside Trail, on the west bank of the St. Joseph River, was opened from Angela Boulevard to Oakwood Boulevard in 2007 and continued north to Darden Road in 2009. A new section of the Northside Trail constructed in 2009 extended it eastward to near 20th Street. Additional shared bicycle routes also were added on City streets, and by the end of 2009, the South Bend Bicycle Network consisted of more than 42 miles of routes.

South Bend Bicycle Network

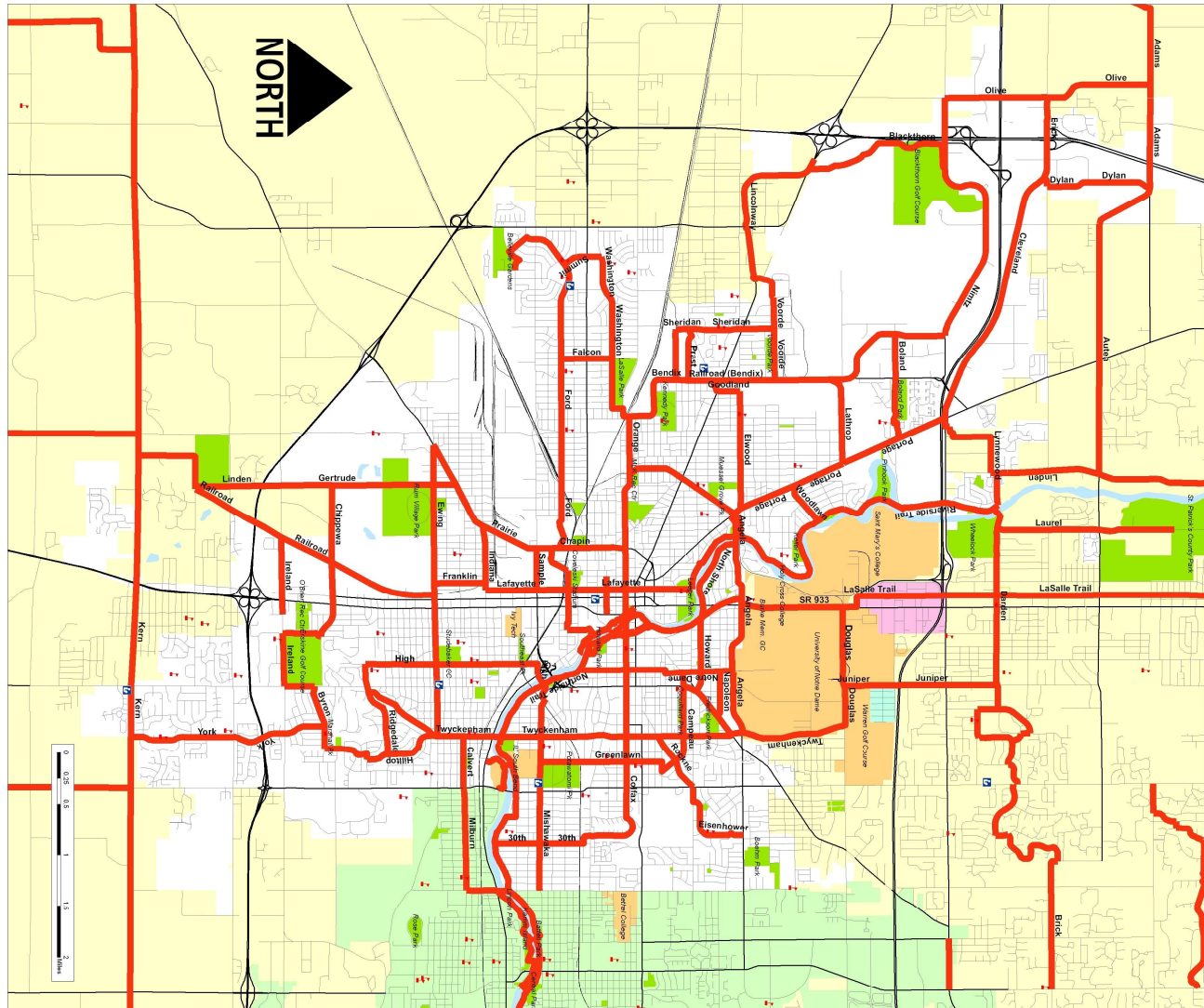
To aid in the planning and implementation of bicycle routes, the City of South Bend established the South Bend Bicycle Network Map in 2008. Working with local bicycling groups, the City developed a proposed network of bicycle routes to link destinations such as employment centers, commercial areas, colleges and universities, schools, libraries, and parks. Connections to existing bikeways, both inside and outside of South Bend, were also planned. While the map designates the best routes to a destination, the City recognizes that unless specifically prohibited by law, bicycles may use any street for travel.

Although slight revisions may be made from time to time, the South Bend Bicycle Network Map indicates the form the South Bend Bicycle Network would take when fully constructed. By identifying bicycle routes, the City of South Bend is able to

- retrofit existing streets with bicycle lanes,
- designate other existing streets as shared routes,
- appropriately accommodate bicycles as streets and intersections are widened, rebuilt, or repaved,
- plan for future routes along proposed streets in outlying areas of the City not yet built, and
- plan for future trails along railroads that have not yet been formally abandoned.

The map also assists the City do capital budget planning for future years and works in coordination with the City's land use and development plans.

SOUTH BEND BICYCLE NETWORK



South Bend Bicycle Network Planning Map (as of 2010)

The proposed South Bend Bicycle Network includes 92 miles of routes within the City. In consultation with local bicycling groups, the City will determine the priority routes within the network to develop each year. At the end of 2009, 42 miles of this network was in place. The majority of the network mileage will be present by the end of 2010, and by the end of 2011, the City expects to have 63 miles of bicycle route installed. Further routes will be added in a 3-5 year time period, but some routes with major construction costs, in areas not yet developed, and along railroad right-of-ways not yet abandoned may take several more years to realize.

The South Bend Bicycle Network is made up of a combination of all three types of bikeways: separated trails, striped bicycle lanes, and shared routes. The City determines each route's bikeway type based on safety, right-of-way availability, pavement width and volume of on-street parking, implementation cost, and other considerations. Even after a bicycle route is added, the City may still make upgrades to improve its usability and safety, and the bikeway type may change over time. For example, the City may elect to reconfigure lanes or eliminate on-street parking to add bicycle lanes along a route that was initially installed as a shared route. The City of South Bend estimates that at maturity, the South Bend Bicycle Network will be comprised of approximately 29 miles of separated trails, 20 miles of striped bicycle lanes, and 43 miles of shared routes.



Bicycle Network New Bicycle Lane

Other Efforts to Support Bicycling

Simply adding bicycle routes on and along streets will not be enough to successfully promote bicycling in the City of South Bend. As the League of American Bicyclists judges the bicycle friendliness of communities, it considers the Five Es: Engineering, Education, Encouragement, Enforcement, and Evaluation & Planning.⁹ Continued progress in each of these areas will make South Bend a Bicycle Friendly Community.

Engineering

Engineering covers the quantity and quality of bicycle infrastructure, including bicycle routes and bicycle racks. In planning for new public works projects, the City of South Bend considers how it may accommodate bicycle use. Streets with striped bicycle lanes receive extra street sweeping compared to those streets without lanes. Bicycle racks have been added along public streets, especially in downtown and along Mishawaka Avenue. Hundreds of bicycle racks can be found near schools and libraries and in city parks, commercial areas, and large apartment complexes; however, bicycle parking is still not adequate in many areas of the city. City ordinance requires new large commercial developments to include bicycle parking.



Bicycle Racks Main Street

Transpo, which provides public bus transportation for the South Bend area, has bicycle racks on the front of all of its buses to allow bicyclists to ride to a bus stop, ride the bus, and then complete the trip on a bicycle. City staff receives training via workshops and webinars to stay updated on best practices in bicycle infrastructure.

⁹ For more on the 5 Es, see http://www.bikeleague.org/programs/bicyclefriendlyamerica/communities/bfc_five-Es.php.

Education

Bicyclists, both adults and children, often need additional education on safe riding techniques and the rules of the road. Motorists must be aware of the rights of bicyclists to use city streets and provide ample room, usually at least three feet, when passing a bicyclist. Bicycling and fitness organizations in the area provide bicycling education classes, while the City of South Bend distributes safety and education information for bicyclists and motorists via its website, newsletters, mobile displays, and printed publications. The Michiana Area Council of Governments funds television public service announcements with bicycle safety information.

Encouragement

Events and special bicycle facilities encourage further bicycle use. South Bend hosts community rides, mountain bike competitions, and road races. Together with local bicycling organizations, the City of South Bend promotes May as Bike Month and sponsors Bike to Work Week activities. Bike to Work Week, usually held in late May, encourages residents to commute by bicycle. The week features a free breakfast for commuters, and other special offers and discounts offered to bicyclists. In 2010, Bike Month also includes Bike the Bend, a noncompetitive community event where bicycle riders can use 30 miles of interconnected streets and trails, mostly in South Bend, that are restricted from motor vehicle traffic for a day.¹⁰

The Bike Michiana Coalition, with cooperation from the City of South Bend, annually publishes a map of bicycle routes in the region. The City also keeps a fully updated map of bicycle routes on its Bike South Bend website. On-street bicycle routes are marked with signs within the City, although improved route markings and wayfinding signs on streets and



Community Ride 2009 Urban Ride



Bike to Work Week Commuter Racks

¹⁰ For more on Bike the Bend, see <http://www.bikethebend.com/>.

trails would encourage increased use of those facilities. The City of South Bend maintains 6 miles of mountain bike trail at Rum Village Park in partnership with the Northern Indiana Mountain Bike Association.¹¹



Police Department Serving Bicyclists

Enforcement

Enforcement is a mechanism to ensure bicycle safety. Members of the South Bend Police Department patrol by bicycle, and the department has an individual who serves as the point person for bicycle law enforcement.

The City of South Bend has provided formal support for the ongoing effort to update Indiana's laws regarding bicycling, including a provision requiring motorists to provide a three-foot separation between their vehicles and a bicyclist using a street.

Evaluation & Planning

To strengthen the use, design, and safety of its bicycle facilities, a community must evaluate its performance. The City of South Bend gathers Census data on bicycle commuting, tracks the number of bicycle-motor vehicle crashes, and receives feedback from bicyclists through its bicycle coordinator and its website. The City has created this bicycle plan to make bicycle travel in South Bend safe, convenient, and attractive.

¹¹ For more on the Northern Indiana Mountain Bike Association, see <http://www.nimba-bike.org/>.

Goals & Action Plan

As it works to become a Bicycle Friendly Community, the City of South Bend has developed bicycling goals. The goals are divided into sections based on the League of American Bicyclists' 5 Es: Engineering, Education, Encouragement, Enforcement, and Evaluation & Planning. Each goal has one or more actions to be completed in the 2010-12 time period. The City department or organization with a lead role in implementing the action has been identified, as has potential partners where applicable. For those actions with a significant cost, a potential funding source has been identified.

The following abbreviations are used in the tables:

BFO: Local bicycling and fitness organizations

BMC: Bike Michiana Coalition

CED: City of South Bend Department of Community & Economic Development

CSP: City of South Bend Department of Communications & Special Projects

CVB: South Bend / Mishawaka Convention and Visitors Bureau

DPW: City of South Bend Department of Public Works

MACOG: Michiana Area Council of Governments

SBPD: South Bend Police Department



Engineering

Action	Lead Role	Potential Partner	Potential Funding Source	2010	2011	2012
Goal: Establish a South Bend Bicycle Network of at least 50 miles						
Add a minimum of 10 miles of bicycle routes each year, beginning with high priority routes	CED, DPW	BMC	City: Local Streets and Roads City: Capital Improvement Program Federal: Transportation Enhancement Private: Bicycling nonprofit support	X	X	
Add additional priority bicycle routes	CED, DPW	BMC	City: Local Streets and Roads City: Capital Improvement Program Federal: Transportation Enhancement Private: Bicycling nonprofit support			X
Goal: Enhance quality of bicycle routes in South Bend						
Begin implementation of striped bicycle lanes in Downtown South Bend	CED, DPW		City: Local Streets and Roads	X		
Upgrade high-use shared bicycle routes with striped bicycle lanes where possible	CED, DPW		City: Local Streets and Roads	X	X	X
Goal: Complete South Bend Riverwalk System						
Construct Northside Trail extension (near 20 th Street to Logan Street)	DPW	CED	City: Capital Improvement Program Federal: Transportation Enhancement		X	

Education

Action	Lead Role	Potential Partner	Potential Funding Source	2010	2011	2012
Goal: Expand education efforts, especially for motorists and bicyclists to share the road and follow traffic laws						
Distribute widely bicycle safety and education information, including rules of the road	BMC, CED, CSP, MACOG		City: General communications MACOG	X	X	X
Promote and offer additional bicyclist education classes	BFO	CSP	Private	X	X	X

Encouragement

Action	Lead Role	Potential Partner	Potential Funding Source	2010	2011	2012
Goal: Promote bicycling events in South Bend						
Provide public safety, marketing, and logistical support to local bicycling events	CSP, DPW, SBPD	BFO, BMC, CED	N/A	X	X	X
Hold at least one bicycling event where vehicle traffic is restricted from streets	BFO, BMC, DPW	CED, CSP, SBPD	Private: Bicycling nonprofit support	X	X	X
Goal: Increase awareness of bicycle routes in South Bend						
Publish a map of bicycle routes updated annually	BMC	CED	Private: Bicycling nonprofit support	X	X	X
Develop and begin implementation of enhanced marking and wayfinding along bicycle routes	CED, DPW	BMC, CVB	City: Capital Improvement Program City: Tax Increment Financing		X	X

Enforcement

Action	Lead Role	Potential Partner	Potential Funding Source	2010	2011	2012
Goal: Increase awareness of laws related to motorists, bicyclists, and other users about sharing the road						
Distribute widely bicycle safety and education information, including rules of the road	BMC, CED, CSP, MACOG		City: General communications MACOG	X	X	X
Goal: Ensure laws support safe usage of streets						
Support efforts to modernize state traffic/bicycling laws, including addition of a three-foot provision	BMC	CED, Mayor's Office	N/A	X		

Evaluation & Planning

Action	Lead Role	Potential Partner	Potential Funding Source	2010	2011	2012
Goal: Use bicycling data to improve bicycling conditions in South Bend						
Collect and review bicycle commuting and crash data to gauge success of efforts	CED, DPW	BMC	N/A	X	X	X
Goal: Maintain an updated Bike South Bend plan						
Review progress and update Bike South Bend plan annually	CED	DPW, BMC	N/A	X	X	X

South Bend Bicycle Network		
Proposed 2010 Route List		
Route (Street) Name	Segment	Proposed Bikeway Type
New Routes		
Angela	Portage-Riverside	Separated
Angela	North Shore-Lafayette	Shared
Angela	Lafayette- Pokagon	To Be Determined
Angela	Pokagon-Notre Dame	Shared
Ardmore	Lincolnway-Bendix	Shared
Byron	Miami-York	Shared
Columbia	South-Monroe	Shared
Elwood	Portage-Goodland	Shared
Franklin	Indiana-Ewing	Shared
Goodland	Elwood-Lincolnway	Shared
High	Sample-Wenger	Striped
High	Wenger-Ridgedale	Shared
Jefferson	St. Joseph-William	Striped
Lafayette	Riverside-Navarre	Shared
Lafayette	Navarre-LaSalle	To Be Determined
Lafayette	LaSalle-Western	To Be Determined
Lafayette	Western-South	To Be Determined
Notre Dame	South Bend - Colfax	Striped
Notre Dame	Colfax-Northside	Shared
Lafayette	Riverside-Navarre	Shared
Riverside	Angela-Lafayette	Shared
South	Michigan-Columbia	Shared
Columbia	South-Crowe parking lot	Shared
Portage	Woodlawn - Bulla	Striped w/ parking
Portage	Bulla-Angela	Shared
Riverside	Angela-Lafayette	Shared
Sample	Northside-Lincolnway	Shared
Sample	Lincolnway-High	To Be Determined
South	Lafayette-Michigan	Striped
South	Michigan-Columbia	Shared
Previously Announced Routes and Route Upgrades		
Colfax	Lafayette-Jacob	Upgrade to Striped
Colfax	Meade-Kaley	Striped
Kaley	Colfax-Washington	Striped
Meade	Bendix-Colfax	Shared
Napoleon	Notre Dame-1/2 blk E of Frances	Striped
Notre Dame	Angela-Napoleon	Shared
Notre Dame	Napoleon-South Bend	Striped
Portage	Lathrop-Woodlawn	Upgrade to Striped w/ Parking
Summit	Washington-Mayfair	Striped
Summit	Mayfair-Ford	Shared
Washington	Kaley-Falcon	Striped
Washington	Falcon-Washington HS	Shared
Washington	Washington HS-Summit	Striped

